Systems, Controls & Instruments (UK) Ltd.

SCI UK

Condensed Catalogue

HVAC: Controls - Control Systems - Communicating Control Systems.

Index of Control System Packages

Description	Page
BMS Terminal Unit Controllers **Protocols: IN-HOUSE…, BACnet…, MODBUS…, JOHNSON Metysis N2…, & OTHERS**	**A1**
MAXI-NET "Mini-BMS" designed for Small to Medium Fan-Coil & HVAC Systems. **Unique WIRELESS OPTION available** **"Plug & Play" format: offers ease of installation, simplification of operation & future expansion** **Select Central Control & monitoring from: Central Stand-Alone Unit or from a Computer.**	**A2/3/4**
Multi -Zone Temperature / Climatic Control Systems: **Series M500...: 31Zone Stand-Alone Capacity. Up-to 372 Zones when networked with:** **In-House *"Maxi-Net mini BMS"* or BMS with other Protocols BACnet. Etc. etc.** **PS2007: 7 Zone Stand-Alone System without networking capability.**	**A5** **A6**
Unit-Zone Temperature Control – Damper Systems. **Series: ETN24AZC…, 24 Vac Room Controlled with Automatic Heat-Cool Control.** **ETN40PI / FMH40PI …, 12 Vdc Room Controlled using 230 Vac/ 12 Vdc power unit.** **IRP/401…, 12 Vdc Infra-Red Controlled using 230 Vac /12Vdc power unit.**	**A7**
VAV Variable Air Volume Control Systems.	**A8**
Universal Infra-Red & Pendant Controlled System Packages for: **2/4 Pipe Fan-Coils** **Air-Conditioners & Heat Pumps**	**A9**
Packaged Control Systems for: **Roof – Top Units…, AHU's…, Chilled Ceiling…**	**A10**
"Voice" Controllers for the Visually Handicapped & Remote Telephone Land- line or Mobile Users	**A11**
Multi- Zone Under-Floor Heating System for Hot Water & Electric Heating Systems: **Currently offers control of up-to 8 indivdual Zones from one central location.**	**A12**

Details on all products are available from our office or Website www.sciuk.co.uk

SCI (UK) Ltd. Manx House, Bousley Rise, Ottershaw, Surrey, KT16 0JX. England
Telephone / Fax: +44 (0) 1932 875227 & 5, E Mail: info@sciuk.co.uk, Webb-Site: www.sciuk.co.uk

PS-X500 Thermostats with Built-in Communication for Building Management Systems

- Bacnet
- Johnson N2
- Modbus
- Others

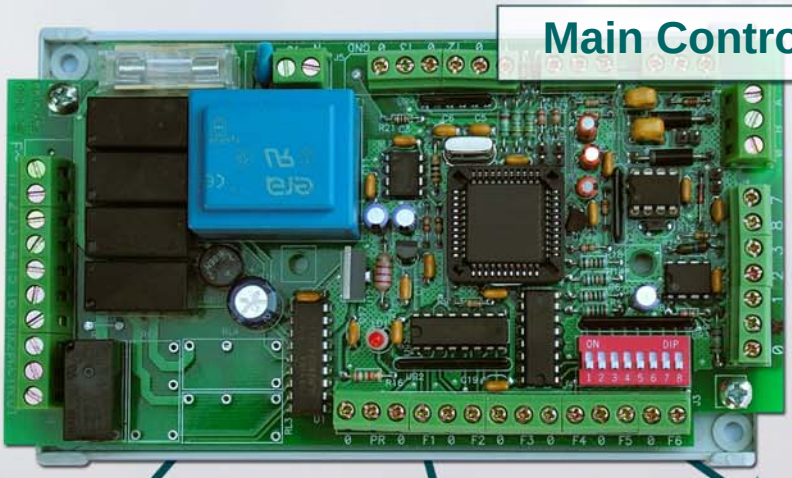
An attractive, low cost, easy to install and troubleshoot, Communicating, terminal unit controllers with the most common communication protocols in the market today, such as Bacnet, Johnson Controls N2, Modbus and others.

Factory pre-programming makes this controllers the best solution in the market for communicating FAN COIL applications.

Available outputs:

- On/Off
- 0-10Vdc
- 3-wire - 24Vac
- PWM

Main Controller



Wall Mount - ETN

OR

Flush Mount - FMH

OR

Panel Receiver & Remote Control

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A2

MaxiNet™

The FIRST Control @Thermostat Network System designed for small to medium applications

Unique WIRELESS OPTION Now Available.

HMI Software

- Extremely easy to use.
- Easy to install and troubleshoot.
- Factory pre-programmed.
- Affordable.

Large variety of controllers

- **Communicating Controllers - Thermostats:**
  - ETN wall mount - 24Vac
  - FMH flush mount - 230Vac
  - PS1700-Fan Coil-Super–230Vac–All-In-OneTM fan coil applications
  - PS1800-A/C-Super–230Vac–All-In-OneTM A/C applications
- **Other Devices:**
  - MZ500 – Multi-Zone system up to 31 Rooms
  - PS1600 – 8 output card to manage other simple on-off devices
  - MCU – Master Control Unit – Manage the network locally

PLUG & PLAY

Electrical Energy Usage – Monitoring / Recording Running Cost of each item of plant on the System

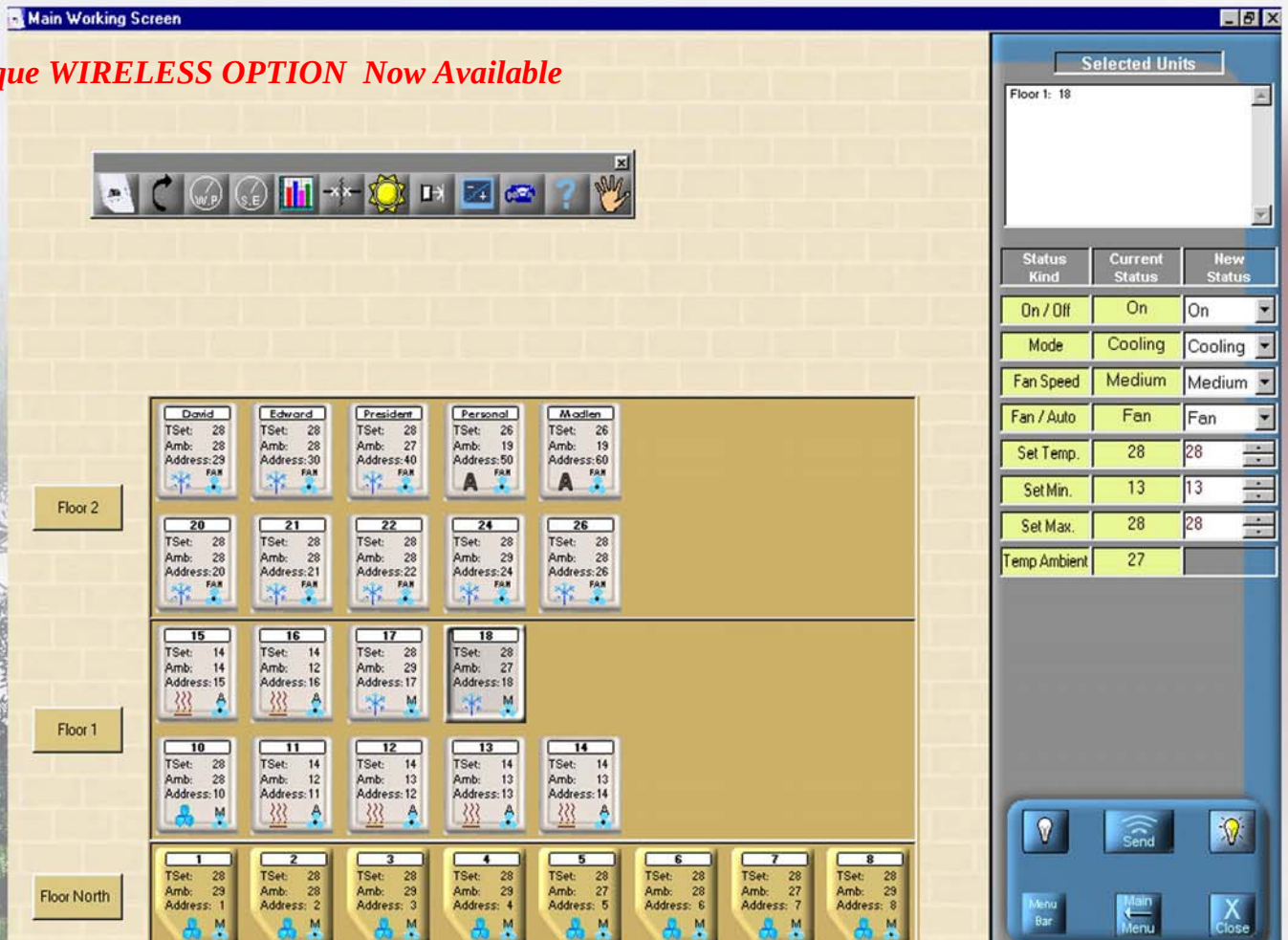
Limit customer use:
- Set point Limits.
- Lock thermostats.

Diagnostics Tools:
- Discharge temperature.
- Outdoor temperature.
- History events.
- Temperature Graph.

Powerful Weekly Program:
- Easy to use.
- 7 days.
- Each day more than 8 events.
- Unlimited amount of programs.

Modular Design and Flexibility:
-Different types of controllers & thermostats to choose from.
-Expand the network in stages.
-Large variety of solutions for different applications.

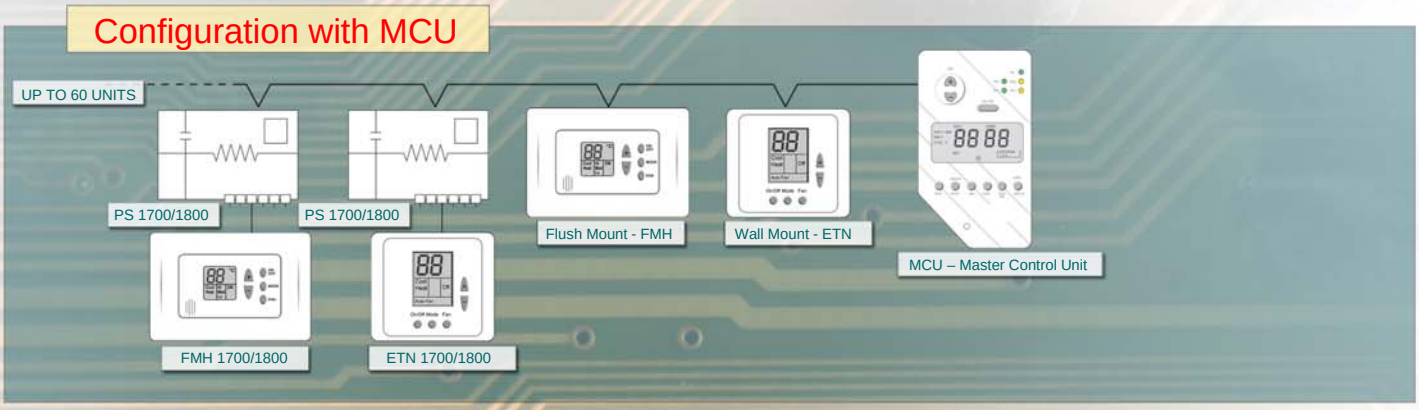
Gateways for IP access & integration into other BMS Systems available



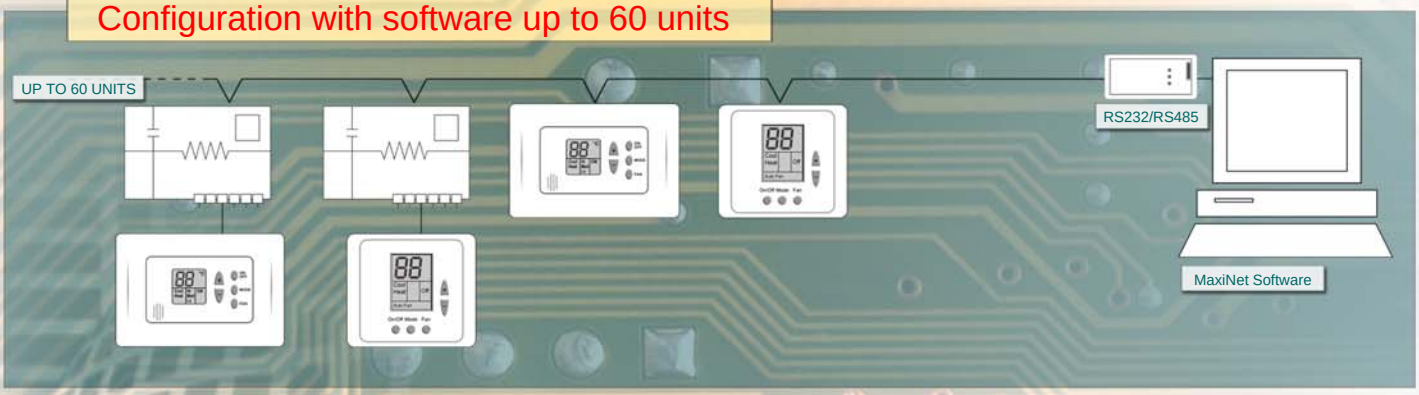
Typical Maxi-Net System Layout Configurations

Unique WIRELESS OPTION Now Available

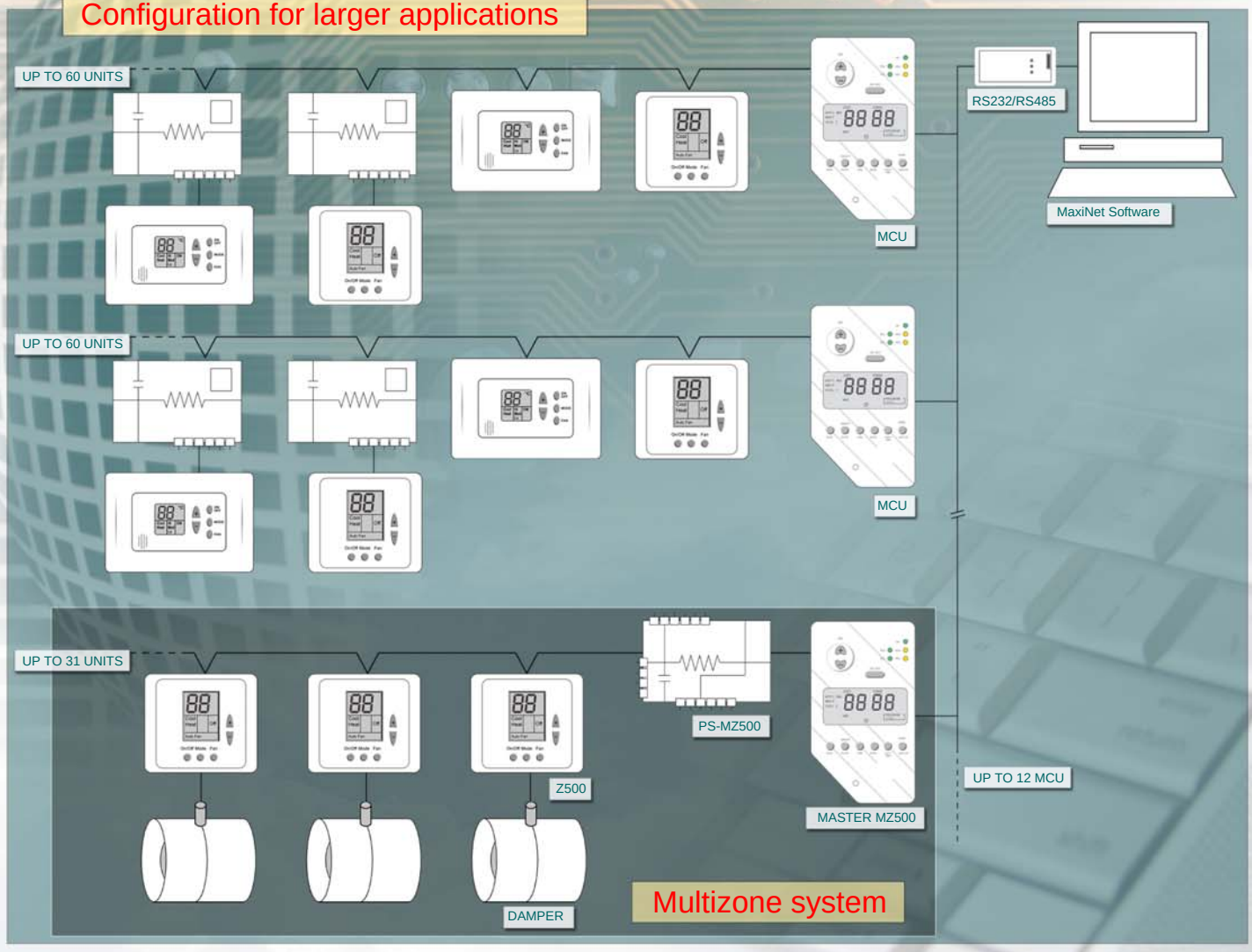
Configuration with MCU



Configuration with software up to 60 units



Configuration for larger applications



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A4 *"Maxi net" Communicating Fan – Coil & HVAC Systems*

A *"Plug & Play, Mini-BMS,"* designed, for ease of installation, and specifically for *Small to Medium Systems.*

Unique WIRELESS OPTION Now Available

ADAPTERS

CABLE & TRANS.

MCU MANUAL UNIT

ETN-C-24…

FMH-C-220…

PS1700 & 1800

ETN1700 & 1800

FMH1700 & 1800

PS1600

Central Control Units

Software/ Hardware Package	Comprises: Installation CD RS232 / RS485 Adapter & Communication Cable PS01 – 220Vac Power Transformer
MCU Manual Unit	Master Address Unit for network, with 7 day (4 time periods per. day , each with Independent temp. setpoint) weekly Programme. Programme is common to all terminal units on the network. Operates either as a stand-alone manual unit –or- in conjunction with software package as a Router etc.
RIGA Wireless Adapter	One to replace the RS232/RS485 Adapter + one per controller

Model	**Clg. Stgs**	**Htg. Stgs. Heat Pump**	**Htg. Stgs. Non-Heat Pump**	**Fan Speeds**	**Modes / Display / Inputs**
24Vac Room Display Controllers with 24 Vac Output Relays, Comms. Link & Unique Address					
ETN-C-24-HC11-1S	1	-	1	1	On / Off, Temp. Adjustment
ETN-C-24-HC22-1S	2	-	2	1	Heat or Cool or Auto Heat -Cool
ETN-C-24-HP11-1S	1	1	1	1	Fan or Auto Fan
ETN-C-24-HP32-1S	2	2	1	1	
220Vac Flush Mounting Room Display Controllers with Comms. Link & Unique Address					
FMH-C-220-HC11-3S	1	-	1	3	On / Off, Temp. Adjustment
FMH-C-220-HC22-1S	2	-	2	1	Heat or Cool or Auto Heat -Cool
FMH-C-220-HP11-3S	1	1	1	3	Fan or Auto Fan
Fan-Coil Controller (2-4 pipe-fan cycling) with 220Vac relays , Comms. Link & Unique Address					
PS1700-FC-SUPER	1	-	1	3	Occupancy sensor, R/A sensor, Mode auto-c/o sensor, Indoor coil sensor – limit draughts Connection to remote Interface Units
Universal A/C & Heat Pump Controller with 220Vac relays, Comms. Link & Unique Address					
PS1800-AC-SUPER	1	1	1	3	Occupancy sensor, R/A Sensor Outdoor & indoor coil defrost sensor Volt- Free Inputs for alarms Connection to remote Interface Units

12 Vdc Display Interface Units - used with PS1700 & PS1800 Universal Controllers –as above

Model	**Mounting**	**Various Modes & speed selections from:**
FMH-1700/1800	Flush	Heat or Cool, Auto Heat – Cool, Manual Fan, Auto Fan
ETN-1700/1800	Surface	Fan Cycling Temp. Control
ETN-1700/1800-IR* (Infra-Red Option)	Surface Surface	Manual & Auto Fan Temp. Setpoints with limits / offset adjustment. Etc. etc.

Options : IRP-1700/1800 Infra-Red Receiver panel **Sensor Selection – See Page 17 for full details**

8- Channel 220 Vac Programmable Card for Switching of Aux. Electrical Plant i.e. Pumps etc.

Model	**Description**
PS1600	8 Channel 220Vac volt-free output relays- includes PS201P power supply

Note: The above is only a selection of terminal unit controllers etc. available. We also provide;

0-10 V dc & 3 Wire Proportional /VAV. etc. Controllers for inclusion on the system
Gateways to integrate into other BMS Systems. Contact Office for fuller details.

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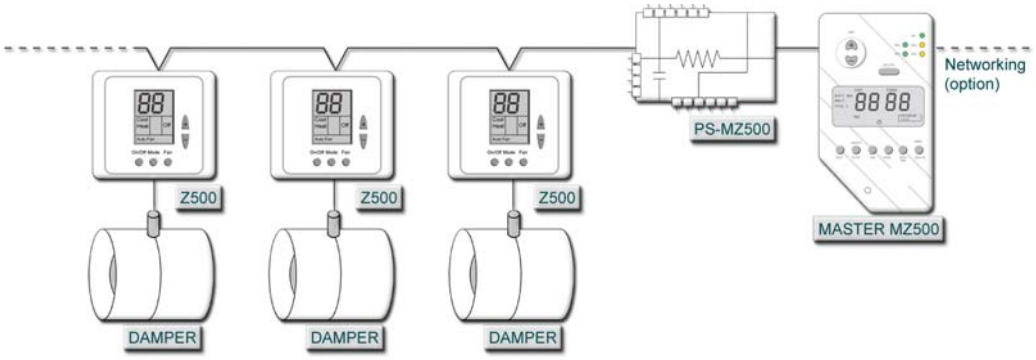
Multi-Zone Climatic System: - Stand Alone or Networked with "Maxi-Net" System *A5*

The M500Z Multi-Zone System can operate either on a Stand-alone basis (up-to 31 zones) or as part of a larger *"Maxi-Net"* MINI-BMS with up to 12 systems (372 damper outlets) on any one *"Maxi-Net"* System. The diagram below show an individual system for up to 31 zones.



By controlling both the central plant (roof-top, AHU etc.) and the individual zones (using proportionally controlled dampers) from one master MZ500 controller excellent system temperature control is achieved.

MZ500-MASTER

Central System

- System power: 24 / 110 / 230 Vac.
- Central Plant Control: Up-to 4 stages Heating & 2 stages Cooling, Select: Heat Pump or Non Heat Pump System.
- Modes: Cool, Heat, Auto Cool – Heat, Fan Only, Auto Fan, Free Cooling
- Input: 0-10 Vdc: - Humidity / Air Quality - control of Fresh-air Dampers: Pressure – control of Bypass Damper.
- Input Temp sensors: - R/A, Outdoor Coil – for Overheat – Frost protection, Free Cooling & Heating.

Individual zone control

- Up to 31 Zones per. system, or 372 with 12 systems incorporated onto a *"Maxi-Net System"*
- Each damper assembly has 3 wire proportional control suitable not only for SCI in-house damper motors but also for actuators of other reputable manufacturers if parallel / metal dampers etc. are utilized.

PS-M500

PS-M502 – Main Central Power p.c.b. – Receives all sensor inputs & information from the zones which is passed on to the MZ500 Master for processing after which the PS-M500 acts on the Master's dictates to active the required outputs to ensure the system works to maximum efficiency.

MZ-500 - MASTER Controller – Processes all the information received, instructing the PS-M500 to take the necessary action to ensure that both the central plant & each individual zone is operating to maximum efficiency. It also sets the following conditions:
All On - Off Status / Modes / Unit's locked- Un locked / Weekly Programme etc.
Communicates with the *"Maxi-Net"* central control unit, when included on that communication system.

MZ500 ZONE

MZ-500 Zone Control: - Can be used to override the zone settings dictated from the MZ-500 MASTER: On-Off status / Temp. setpoint / mode / adjust its own damper control settings.

DA..DAMPERS

DA- Damper Assemblies: - These are available in 3 sizes 150/200/250 mm dia. Being constructed of ABS. They have integral 24 Vac proportional **action** (3 wire) motors. Note. The system can also operate also with other manufacturers damper actuators/

DA6-24-3W – 150mm**;** **DA 8-24-3W –** 200mm**:** **DA10-24-3W -** 250mm**.**

JP500 Junction Boxes: To connect Damper Assembly to MZ500 Zone Controllers.

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Non - Communicating Multi-Zone Climatic System

The Master Controller & Power Unit, working in conjunction with the attractive Zone Controllers, allows centralised control of the main plant, the 7 zone proportional action Dampers and the Bypass Damper thus ensuring a high standard of environmental temperature control is maintained in a most efficient & cost-effective way.

PS2007/E/P

Central Control System (Combination of M2007/E & PS2007/E/P) features include:

- **Power:** 230 Vac.
- **12 Vdc- 4 Wire Multi-Core Cable:** Connects the PS2007/E/P Power board to the M2007/E, all the Zone Controls & Dampers.
- **Control of:**
  - Up to 4 stages of Heating & 2 stages of Cooling
  - In conjunction with the Zone Controllers, ETN/FMH –P-IR, up to 7- Zone Dampers:
  - Bypass Damper position, depending upon the aggregate open / closed position of all the Zone Dampers on the system.
  - In response to Outdoor Coil Sensor:
    - Initiation of Coil Defrosting in heat pump mode.
    - Automatic selection of Outdoor Fan High or Low Speed.
  - In response to Indoor Coil Sensor:
    - Initiation of Coil Defrost / Indoor Fan switch-off to eliminate uncomfortable cold draughts.
- **Selection of:**
  - Heat-Pump or Non-Heat Pump operation.
  - Modes: Heat, Cool, Fan Only.
  - 3 Indoor Fan Speeds.
  - Weekly Programme – common to all zones- option.

M2007/E/P

System elements:

ETN41-P-IR

- **PS2007/E/P – Main Central Power P.c.b -** Receives all sensor inputs & information from the zones which is passed on to the M2007/E/P Master for processing after which the PS-2007/E/P acts on the Master's dictates to active the required outputs to ensure the system works to maximum efficiency.

- **M2007/E – Master Controller** - Processes all the information received, instructing the PS-2007/E/P to take the necessary action to ensure that both the central plant & each individual zone are operating to maximum efficiency. It also sets the following conditions:
  All On - Off Status / Modes / Weekly Programme etc.

FMH41-P-IR

- **ETN41-P-IR – Zone Control** - Can be used to override the zone settings dictated from the M2007/E/P master controller On-Off status / Temp. setpoint / mode / adjust its own damper control settings.

- **FMH41-P-IR - Zone Control – Flush mount -** Can be used to override the zone settings dictated from the M2007/E/P master control. On-Off status / Temp. setpoint / mode / adjust its own damper control settings.

DA../ 401

- **DA../401 Damper Assemblies** - These are available in 3 sizes 150/200/250 mm dia. Being constructed of ABS. They have integral 24 Vac proportional action (3 wire) motors.

DA6/401 – 150mm**:** **DA 8/401** – 200mm**:** **DA10/401** – 250mm

- **RT41 Infra-Red Transmitter:**

Series PSMZ-100 & PSMZ-200, 24 Vac, 4 & 7 Zone System

RT41

This is a 24 Vac. System, equivalent to the above 230 Vac., system having the following additional features:

- **Free Cooling facility**
- **Can utilize other manufacturers damper actuators as alternatives to our own.**

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There are two basic systems:- 24 Vac powered Room Controller System
12 Vdc powered Room Controller System & Infra-Red Control System.

Series ETN24AZC 24 Vac Automatic Heat-Cool changeover System

Creating a new or additional, independent Zone onto a new or existing air-side system with the following controllability:

• **Automatic Heat –Cool** • **Independently adjustable Temperature Control**
can easily and cost-effectively be achieved using this control package;

ETN24AZC...
ETN40PI

System Elements:

• **ETN24AZC Room Control:**
- 24 Vac power
- Provides:
  - Range 10 - 30°C
  - On / Off or Proportional - 3 Wire – Output to Damper Assemblies.
    The 3-Wire output can be utilized to control not only the integral actuators on our Damper Assemblies, but also on propriety actuators from all major manufacturers.
  - Adjustable Damper actuator "Run-Times" to match the system response.
  - Output power 5VA – sufficient to control up to 3 Zones using our Damper Assemblies.

FMH40PI

• **DA../T/24/3wire Damper Assemblies:**
- These are available as 150 / 200/ 250mm dia. ABS Plastic with circular Damper and being complete with integral:
  - Damper motor
  - Up-stream sensor which responds automatically to the central systems mode (heat or cool) to automatically changes the control mode of the ETN24AZC room controller to the same.
    The controller then, utilizing its own integral sensor or alternative remote sensor, controls room or R/A temperature accordingly.

PS201P

Manual Heat-Cool Infra-Red & Room Systems utilizing 230 Vac – 12 Vdc Power Unit

The PS201P common power supply provides a 12 Vdc output to power <u>either</u> of these systems:

• **PS201P... 230 Vac/ 12 V dc Power Supply:** Mount in ceiling close to Damper & Receiver Panel or room control
PS201P – Single Damper power.
PS201P/P01- Two Damper power.

IRP40

• **Infra-Red System Elements:**
- **IRP/401 Infra-Red Receiver**
- **RT40 Infra -Red Transmitter:**

Mounting the infra-red receiver panel on or close to the ceiling, for retro-fit applications, eliminates décor damage and the need for any subsequent, costly re-decoration.

RT40

• **Room System Elements:** (No. of Dampers controlled depends upon PS201P power supply used)
- **ETN40PI:** Surface Room mounting controller with 3- wire proportional output to Dampers(s).
- **FMH40PI:** Flush mounting Room controller with 3-wire proportional output to Damper(s).

• **Damper Assemblies for all Systems:**

24 Vac Hard Wired System

Model	Dia. mm	Max. Air-Flow m3/sec
DA6/T/24/3wire	150	255
DA8/T/24/3wire	200	340
DA10/T/24/3wire	250	425

Infra-Red System

Model	Dia. mm	Max. Air Flow m3/sec
DA6/401	150	255
DA8/401	200	340
DA10/401	250	425

DA... /T &.../401

Accessories: CABLE 7METERS – for IRP/401 connection
CABLE 3METERS – for PS201P connection
TRAN24-5VA - 230/24 Vac 5VA transformer for ETN24AZC

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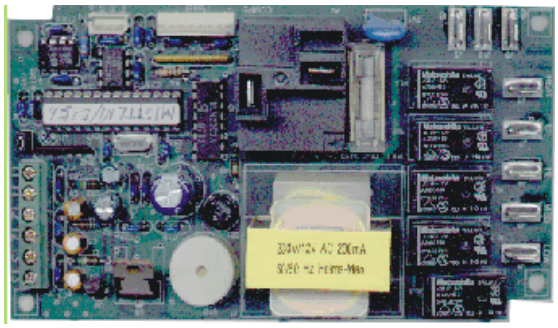
Extremely flexible, based on a common Power Board with various Interface Control Options – plug & play:



Standard Power Board Control & Specification - (Customisation is an option)

- **Temp. Settings:** • **Ranges:** 10 – 30 °C: • **Deadband**: +/- 0.5 °C: • **Diffs:** +/- 0.5 °C
- **Inputs:** • **Power:** 230 Vac • **Sensors:** R/A – O/C – D/A • **Fault**: optional
- **Relay Outputs**: Cooling – Heating (or Reversing Valve) - 2nd stage Heating (option)* - 2.5 hp cooling (option)* {6(3) A @ 230 Vac}. * If 2.5 hp. relay specified 2nd. Stg htg. not available.
  3 x Indoor Fan Speeds - Outdoor Fan - Swing (option)
- **Time Delays:** 3 mins. (+/_) on cooling function. (+/-) times vary slightly for recycling purposes.
- **Defrost progs**. • **Indoor coil**; –1 to +8 °C • **Outdoor Coil**: 0 to 16 °C - 5/22 mins. max duration/sample
- **Timer Programmes:** **Daily** 1 x Start Stop per day with manual override facility (standard transmitter).
  Weekly: 2 x Start / Stops per day for periods: Mon. to Fri. + Sat. + Sun.

MIGA...

Inter-Face Control Options

Infra-Red Receiver

• **Transmitter;** For remote control of all the functions detailed above.

IRT03. - daily programme

Transmitter

• **Receiver:** Receives instructions from transmitter & relays them to Power Board
There are two types:

IRP– small plastic module (ideal ceiling /grill mtg.)
MIP – Adhesive Vinyl (ideal for surface mtg.)

Surface Mount

• **User Interface Control**: (Option of additional Infra-red control function available)
Available as Surface or Flush mounting unit allows them to be mounted either as integral part of the A/C unit etc. or remotely

MIGAETN - Surface mount
MIGAFMH - Flush mount

Systems incorporating Humidity Control in addition to Temperature Control

Flush Mount

These systems are available – please contact office for fuller details.

Options: Remote Temp. sensors – See page 18

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I

Series RFT..

Series RFT... 230 Vac Roof Top Air-Conditioner / Heat-Pump Controller

Complete Control package for these applications, with functions for;

• **Free Cooling** • **Air Quality** • **Weekly Programme** • **BACnet. BMS - Optional**

• **0 – 10 Vdc Outputs**
CW Valves
F/A Damper
2 x HWS. Valves or Res. Htg.

• **Switched Outputs**
Indoor/Outdoor Fan
Twin Compressors
Multi-Stages Res. Htg.
Reversing Valve for Heat Pump

• **Sensor Inputs**
Temp. Room/RA/OD
Outdoor Coil for Defrost
Air Quality

Room Display Unit

• **Adjustments;** Temp & Air Quality Setpoints / Differentials. - Sensor Temp. Settings.
Modes; Heat / Cool / Auto / Fan Only. - Fan Speeds.
Weekly Programme. - Real Time Clock

• **Display of;** Temp. Setpoints & Ambient Conditions – Space / R.A. / Outdoor
Alarm Conditions - 2 x Frig. Circuits / Heating Circuit / Plant Override

RFT2200 – Room Unit + PSRFT – Power Supply Unit

I

Series SPL2200

Series RFTI.. 24 Vac Roof-Top Air-conditioner / Heat Pump Controller

Similar Specification to RFT2200 controller but with added option of Humidity / De-humidity function.

RFTI – Room Unit

Series SPL2200 Universal Air-Handler Unit Controller

Complete AHU Control Package with functions for;

• **Free Cooling** • **Heat Recovery** • **Air Quality** • **Weekly Programme** • **BACnet BMS – Optional**

• **0 – 10 Vdc outputs**
HWS & CW Valves
FA/RA/EA Dampers
Heat Recovery Damper

• **Switched Outputs**
Fan Start / Stop
HWS Pump Start / Stop
Compressor Start / Stop

• **Sensor Inputs**
Temp. Room /RA/DA
OD/ MA
Air Quality- Option

Room Display Unit

• **Adjustments;** Temp & Air Quality Setpoints / Differentials. - Sensor Temp. Settings.
Modes Heat / Cool / Auto / Fan Only. - Fan Speeds.
Weekly Programme. - Real Time Clock

• **Display of;** Temp. Setpoints & Ambient Conditions – Space / R.A. / Outdoor
Alarm Conditions - 2 x Frig. Circuits / Heating Circuit / Plant Override / Fan Fail

SPL2200 – Room Unit + PSSPL – Power Supply Unit

I

Series S4007

Series S4007 Multi -Zone Chilled Ceiling (Under floor A/C or Heating) Systems

Purpose designed for small office suites & larger domestic premises these offer control of;

• **Central Air-conditioner or Heat-Pump Unit**
• **Up-to 7 individually controlled rooms for both Dry Bulb & Wet Bulb Temperatures.**

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"VOICE" Controllers for Remote Telephone & Visually Handicapped Users *A11*

These controllers *"SPEAK"* to the user to advise of current ambient conditions and controller settings. With this information the user, can make any necessary changes either directly by pressing the buttons on the controller or by their telephone keypad, if they are addressing the controller remotely over an STD line or mobile network, from anywhere in the world.
The former is ideal for any visually handicapped person and the latter for any person wishing to check-out existing conditions & make changes accordingly from a remote position. e.g. second home owner.
The dial-out alarm feature is extremely useful for both Commercial & Residential applications.

Series CEV 24… 24 Vac Programmable " VOICE Responding" Temperature Controller

By pressing any of the controller's buttons the user is advised by VOICE of the following ambient conditions & controller's settings:
• **Ambient temperature – Setpoint temperature.** • **Controller Status & Mode.**

Series CEV24…

The user can respond using the buttons to make changes to any of the above controller's settings. When this is done the controller will confirm by VOICE that the changes have been made.

• **24 Vac** • **Range;** 10 – 30°C • **Up-to;** 2 Stages Clg. & 3 Stages. Htg. • **Time delay**: 4 min.
• **Modes**: Heat, Cool, Auto Heat-Cool, Fan only • **Password protected:**
• **Weekly programme**: Mon. to Fri. + Sat. + Sun. – 4 time periods per day each with own temp. set-point.
• **Electrical ratings** 2 Amp. @ 24 Vac
• **Options:**
  ° **External Speaker**
  ° **Model CEO –** Calls out to 3 designated telephone numbers on high temp. & input fault alarm.

Model selection: CEV24SUPER: Suitable for A/C & Heat-Pump applications

Series CEM 24… 24 Vac Programmable " Telephone Responding" Temperature Controller

Connecting to this control via a normal STD land-line or mobile phone is easy. After password identification the controller "Speaks" to the user to advise current ambient conditions & controller settings.
• **Ambient temperature – Setpoint temperature.** • **Controller Status & Mode.**

The user can respond to these spoken messages, by pressing selected keys on their telephone keypad to make any adjustments / changes to the controllers settings. These changes are then confirmed by VOICE from the controller.
This is a cost-effective service tool not just for the commercial market but for second home owners etc….

Series CEM24…

• **24 Vac** • **Range;** 10 – 30°C • **Up-to;** 2 Stages Clg. & 3 Stages. Htg. • **Time delay**: 4 min.
• **Modes**: Heat, Cool, Auto Heat-Cool, Fan only • **Password protected:**
• **Weekly programme**: Mon. to Fri. + Sat. + Sun. – 4 time periods per day each with own temp. set-point.
• **Works with or without answering machines.**
• **Electrical ratings** 2 Amp. @ 24 Vac
• **Options:**
  ° **External Speaker**
  ° **Model CEO –** Calls out to 3 designated Telephone numbers on high temp. & input fault alarm.

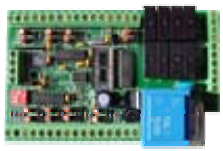
Model selection: CEM24SUPER: Suitable for A/C & Heat-Pump applications

For a Real-Time Demonstration of this controller in action all that's required is to make a telephone call: -
Go to Page 19 for the Telephone Number & full details.

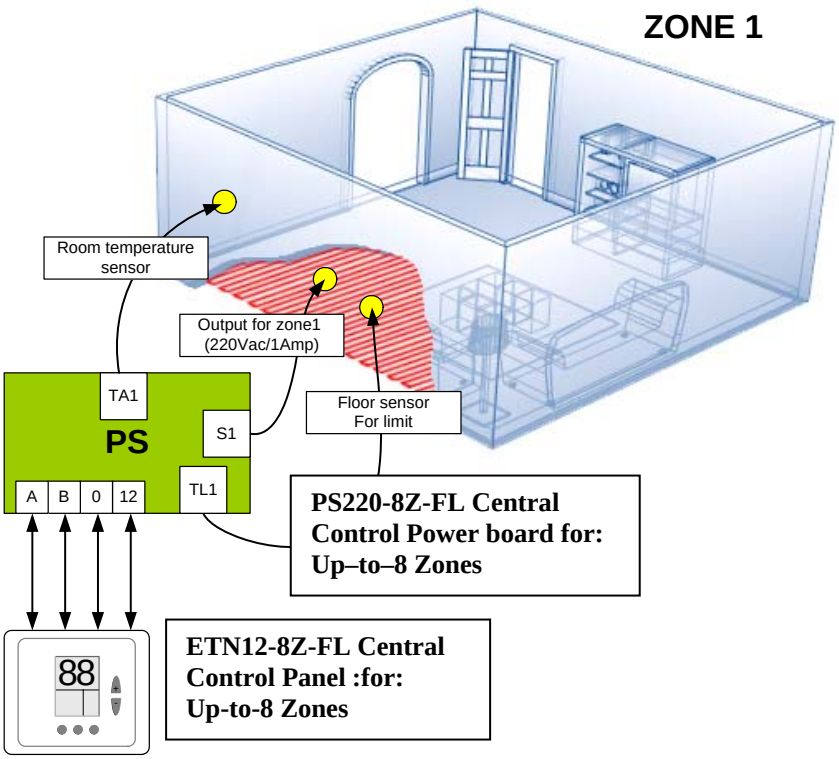
SCI (UK) Ltd. Manx House, Bousley Rise, Ottershaw, Surrey, KT16 0JX, England.
Tel / Fax: +44 (0) 1932 875227 & 5, E mail; info@sciuk.co.uk, Web-site: www.sciuk.co.uk

Multi-Zone Under floor Heating System

8-Zones, either water or electric applications, can be centrally controlled from a single controller & output power board with only one or two if high limit required, sensors mounted in each zone.



PS220-8Z-FL



ETN12-8Z-FL

System elements:

- **PS220-8Z-FL –Central Power boards.** Receives sensor inputs from the zones which are passed onto the ETN12-8Z-FL Central Control Panel for processing, after which it operates under the dictates of this panel to switch On/Off the Output relays (rated 1 Amp @ 230 Vac) to activate/ de-activate the:
  - Actuators on the hot water manifolds –or- relays / contactors for electric heat.

RS01/ 02

- **ETN12-8Z-FL - Central Controller** - Processes all the information received from the Zone sensors via the PS220-8Z-FL Central Power Board to display readings and control each individual Zone for:
  - System On / off Status
  - Ambient temperatures
  - Heating operative or non-operative
  - Set point temperatures
  - High limit set point & actual temperature

TS01

- **Temperature Sensors & patrass:**
  - **RS01 Room:**
  - **RS02 room – Averaging:** Two required for averaging
  - **TS01 Cable 0.8 m:**
  - **WP4 Patrass for ETN:**

See Page No.18 for full details of sensors.

- **Motorised-Valves & manifold sets available. –** Contact office for details

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